

REMARKSI. Status of the Claims

Claims 1 through 9 are pending. Claim 1, the sole independent claim, has been amended to address the issue of written description under 35 U.S.C. § 112, first paragraph, raised in the October 10, 2003 Office Action. Claim 2 has also been amended in accordance with the remarks made in the Office Action at page 3, line 3. Support for the amendment is found in the specification and claims as originally filed. Entry of the amendment and favorable reconsideration are respectfully requested in light of these remarks.

II. Rejections Under 35 U.S.C. § 112

Claims 1 through 9 have been rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. In the previous amendment, certain functional limitations were added to claim 1 to describe the translation of the mandrel in operation of the apparatus and these were said to lack support in the application as filed. Further, language that was added to claim 1 describing a distance between the carriage and the center of mass of the tire was said to lack written description in the application as filed.

The language objected to by the Examiner has been deleted. The Examiner pointed out at page 2 of the Office Action that in the original description, in the third to last paragraph of the specification (paragraph [0029]), there is support for the rasping tool contacting the tread, shoulder, and sidewalls of the tire. Moreover, as pointed out by the Examiner, the specification describes that it is the combined movements of the mandrel and the tool that enables this contact to take place. This language from paragraph [0029] has been incorporated into claim 1. Applicant submits that this amendment does not raise new issues, and respectfully requests that the amendment be entered and that the new matter rejection be withdrawn.

As explained below in connection with the rejection over prior art, the functional language illustrates that, in the present invention, the translation of both the mandrel and the tool is adapted for working on the tread, shoulders and sidewalls of the tire for the recapping operation. In the prior art, translation of the mandrel shaft in an axial direction of the shaft is merely for adapting the apparatus for different sizes of tire. Thus, the translation disclosed in the prior art is not the same as the claimed translation.

The rejection under 35 U.S.C. § 112, second paragraph, set forth in paragraph 2 of the office action, is also moot in view of the foregoing amendment.

### III. Rejections Under 35 U.S.C. 102(b)

Claims 1 through 4, 6 and 7 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 3,528,476 (Hawkinson, Jr.) or U.S. Patent No. 2,965,162 (Hawkinson) (collectively, “the Hawkinson references”). Applicant respectfully traverses, at least because neither of these references discloses translation of both mandrel and recapping tools perpendicularly with respect to each other in such as way to permit contact of the tool with tread, shoulder and sidewalls of the tire for a recapping operation, as presently claimed.

The claimed invention is directed to an apparatus for working on a tire. The claimed apparatus improves over the prior art in that it is adaptable for all sizes of tires without the drawbacks of vibrations and instability. See, for example, the present specification, for example at paragraphs [0009] through [0011].

An important feature of the invention of claim 1 is the configuration of the mandrel on a first support structure and the movement of the mandrel with respect to the recapping tools mounted on a second support structure. The mandrel is fitted on a first support structure so as to translate in a direction parallel to the rotational shaft of the mandrel. The tools are fitted on the

second support structure so as to translate in a direction approximately perpendicular to the translation of the mandrel. These movements are in connection with the recapping operation performed on the tire.

According to the invention, to recap a tire, each structure is permitted to translate. One displacement is the displacement of the tire in the direction of the rotational shaft of the mandrel. Another displacement is the displacement of the tool on the second structure. The combination of these two movements permits contact between the tire and the tool on all relevant surfaces: tread, shoulder and sidewall.

With regard to the assertions in the January 15, 2003 and October 10, 2003 Office Actions, it is respectfully submitted that the translation of shaft 9 in Hawkinson or first shaft 18 in Hawkinson, Jr. does not occur during work on the tire to permit contact of the recapping tools with the tire tread, shoulder and sidewalls. From the description of the motion imparted to the shafts in the respective disclosures, it is clear that any permitted movement of the shafts in an axial direction occurs before working on the tire, *i.e.* as an adjustment for loading the tire onto the device prior to the recapping operation. This movement has nothing to do with the recapping operation or with permitting contact with the edges, sidewalls and shoulders of the tires.

In the Hawkinson references, a support structure supports a rotating mandrel for holding a tire. A second support structure supports a tool. Taking Hawkinson '162 as an example, the second support structure is associated with a roller 69 and template 66 to allow the tool to follow the shape of the tire. Hawkinson describes this relationship as follows: "With the follower roller 69 in engagement with the template 66, oscillatory movement of the carriage 31 will cause the buffing wheels to move bodily in a path defined by the outline of the template, and buff the tire to the desired profile." (See col. 5, lines 39-43). Thus, the mandrel does not

translate during the operation. Such movement of the mandrel that is permitted by the apparatus (which was pointed out by the Examiner) is not done in association with the tool support translation to permit contacting of the tread, sidewalls and shoulder of the tire for recapping. Rather, contact is conducted by oscillating carriage 31 and moving the tool in the path dictated by the template. This is essentially what is described in the “prior art” section of the present specification, in paragraph [0007].

Ordinarily, element 16 in Hawkinson, Jr. the base frame, would be understood as corresponding to the claimed rails. However, elements 16 in Hawkinson, Jr. are clearly perpendicular to the mandrel shaft. Instead, to the extent that there is a pair of rails in Hawkinson, Jr. oriented in a direction parallel to the direction of the mandrel shaft, these are rails 25. However, guide rails 25 also translate in a direction perpendicular to the axis of the mandrel shaft, along threaded shaft 31, and they do not constitute a support.

Thus the Hawkinson references do not disclose every element claimed in claims 1 through 4, 6 and 7 and the reconsideration of the rejection under 35 U.S.C. § 102(b) is respectfully requested.

V. Rejections Under 35 U.S.C. § 103

Claims 1-4, 6, and 7 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over the Hawkinson references in view of U.S. Patent No. 3,675,706 (Cahill). Claim 7 has been rejected under 35 U.S.C. § 103(a) over these references further in view of the alleged admitted prior art. Claims 5, 8 and 9 are alleged to be unpatentable over these references and further in view of U.S. Patent Nos. 6,251,204 (Andersson), 4,036,677 (Marangoni), and 2,009,524 (Schmidt).

Cahill does not, by itself or in combination with the other references, teach a recapping apparatus where there is movement of a mandrel shaft in the direction of the axis of the shaft and movement of a tool support structure in an orthogonal direction for recapping a tire. To the contrary in Cahill, tire support means 11 is pivottally mounted on base 10 (col. 3, line 18). The tire support does not translate in the direction of the shaft, but rather oscillates on a circumferential axis (col. 3, lines 31-32). Thus even if combined with the Hawkinson references, Cahill does not teach the translations specified in the present claims.

Nor is there adequate motivation to make such a combination, as required by law. It should also be clear that the stated objects of the present invention, including the ability to contact the tread surface, sidewalls and shoulder of a tire for recapping, and the desire for increased stability and decreased vibration in a recapping apparatus, are not in themselves admissions of prior art and do not constitute motivation to make the claimed invention. Without limiting the claimed invention, the description of the prior art at paragraph [0007] of the present specification distinguishes apparatuses that use a template for moving the tool support around the tire, which is what Cahill and the Hawkinson references disclose. Clearly, the motivation to use other means to contact the tread, sidewalls and shoulders of a tire for recapping is not present in these references.

Applicant has also reviewed the references applied against dependent claims 5, 8 and 9. Without admitting that these references show any feature of the claimed invention, applicant notes that these references do not disclose the features that are demonstrated above to be missing from the Hawkinson references and Cahill. Specifically, none of the references, taken alone or in combination with each other, teach the movement of a tire support in a direction parallel to the axis of the supporting shaft, and the movement of the tool support in a perpendicular direction.

For at least the foregoing reasons, applicant respectfully requests reconsideration and withdrawal of the outstanding obviousness rejections.

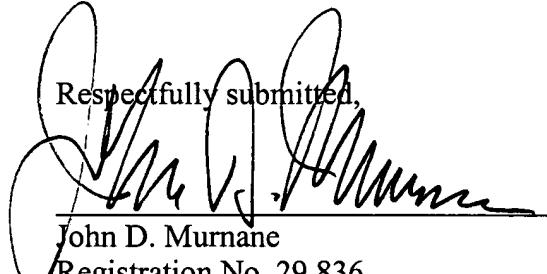
CONCLUSION

This Amendment After Final Action is believed to place this application in condition for allowance and, therefore, its entry is believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicants' undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorneys may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

  
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